

# **2010 Defense Industrial Base Seminar & Workshops**

## **Summary**



**15-16 June 2010**

**Prepared by the Air Force Research Laboratory,  
Manufacturing Technology Division**

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## Introduction

The Director, Defense Research & Engineering, and the Director, Industrial Policy, sponsored a first-time event co-hosted by the Joint Industrial Base Working Group (JIBWG) and the North American Technology and Industrial Base Organization (NATIBO). The Defense Industrial Base Seminar and Workshop brought together over 200 industrial analysts and acquisition professionals from government, industry, and academia to hear selected speakers and discuss topics revolving around current trends and strategies impacting the defense industrial base. The event focused on how the military customer can continue to leverage a capable and viable defense industrial base.

The event kicked off with a plenary session consisting of senior leaders from across government and industry that provided insight into trends, issues, opportunities and expectations with regard to the defense industrial base. Breakout sessions on the second day focused on organizations promoting solutions including tools, services, and investment programs meant to mitigate barriers and risks that exist as military customers leverage the industrial base in support of the Warfighter.

The event was held at the National Defense University's Lincoln Hall, at Fort McNair in the District of Columbia on June 15 and 16, 2010. Information regarding the event is available at [www.usasymposium.com/ibconference](http://www.usasymposium.com/ibconference).

## Plenary Summary

### ***Cost Reduction***

A major theme at the 2010 Defense Industrial Base Conference was the need for industry and government to reduce programmatic inefficiencies and material costs. Many participants acknowledged the changing landscape of the Defense Industrial Base (DIB), citing more complex, more competitive and more commercial characteristics emerging. Also forcing change on the DIB are the current theatre conflicts that simultaneously expedite and strain DIB issues—the DIB must provide the best products for the current forces, while continuing to be a good steward of taxpayer dollars.

The overarching theme of diminishing budgets has the industry grasping at the concept of 'doing more with less.' Currently, \$1.5 billion is spent daily through the Department of Defense, and all parties involved must mitigate as much risk as possible associated with this spending. Efficient resource allocation and reduction of redundant processes will be paramount in capturing significant and meaningful cost reductions for the DIB. Efficient resource allocation means funding projects that have effective outcomes and also means decision makers must terminate obsolete programs which provide minimal return to the war fighter. Budgetary and policy decisions will favor programs that complete multiple tasks and share programmatic resources.

Budgetary constraints will play an equally large role in the cost controls expected of the DIB. Military budgets are planned through 2015, and a shift in focus to place more emphasis on lifecycle engineering to prolong the service life of active programs may be forthcoming. Mike Kistler, Executive Director, Naval Systems Engineering Directorate, highlighted the government's focus on affordability through strong requirements control and reducing the types/models of warfare systems to create equipment commonality that reduces costs. Modularity will offer the ability to reconfigure systems as needed and reduce integration and modernization costs.

Programmatic decisions related to upfront vs. lifecycle costs continue to create issues. Communication between decision makers must clearly identify the costs of expected maintenance and lifecycle costs. These conversations become very difficult when the government can "only buy what we can afford," as one speaker noted. Efforts to insert cost-saving modernization throughout product lifecycles should adjust accordingly with available budgets.

Industry is expected to change in the face of financial strains, as well. Improved cost performance against contracted costs is necessary. Process and facility changes are expected as the industry looks to become more agile in the face of its dwindling financial resources. Several opportunities for cost savings present themselves in the procurement of raw materials. Collaboration between aviation, automotive and naval industries could identify mechanisms to control or reduce costs associated with material procurement. Likewise, leverage of corporate purchasing power across large Tier 1 suppliers could consolidate material purchases across programs and achieve significant quantity discounts and best pricing. Industry and government no longer have the available resources for incremental cost overruns and exquisite demands will undergo reevaluation as all participants look to eliminate unnecessary costs. The bottom line goal for the DIB is creating an industry where the government gets a better value for the defense dollar it is spending.

### ***DIB Vitality/Sustainability***

The sustainability of the DIB was addressed in the plenary presentations as well as many break-out sessions. One top issue is the continued push of globalization and its effects on the DIB. Many industry participants feel the DIB has been too complacent in sectors that were once industry leaders. The government is no longer a driving force in dictating the movement of the markets.

The single biggest issue surrounding the vitality of the DIB is the availability and accuracy of industry information associated with lower-tiered suppliers. Some industry reports focus on old data—in some cases dated to 1996—that don't address or identify the third or fourth tier suppliers to major defense operations. Likewise, outdated reports fail to capture the considerable consolidation that has occurred in American DIB supply chains over the last two decades. Accurate analysis of lower-tiered suppliers is a serious issue that needs to be addressed. Many small companies that fall into this category provide unique products critical to DIB innovation.

Another area of concern for the DIB is its aging workforce. The stability of procurement plans directly relates to employment variation in the skilled trades. If procurement instability can be reduced, a stable trained workforce can provide production efficiency and contribute to reduced rework. The aging DIB workforce contributes much of the knowledge management underpinning current programs. Highlighting the concerns about knowledge management, Dr. Ashton Carter, Under Secretary of Defense for Acquisition, Technology and Logistics, noted that the industry demographics are not in favor of a sustainable succession of knowledge. The average age of machinists is 58.5 years and many smaller second and third tier machine shops have a great chance of ceasing to exist in a decade. Failure to incorporate these second and third tier suppliers into employment discussions now will only lead to a larger gap in crucial knowledge management and to continued skill sets exiting the industry. Likewise, a shortage of undergraduate degrees in engineering will only propagate the demand for critical skills in the DIB. A directed focus of the DIB should be on recruitment of new talent and retention of top talent.

Expected reductions in defense expenditures will have significant affects on the future of the DIB. Depending on spending scenarios, many prime contractors may scramble to maintain necessary revenues and profit margins, adding more stress to the current contracting methods between industry and government. Many contractors already feel attacked by pressure to investigate firm-fix-price contracts, and continued price pressures are forcing them to change their approach to business. Lower tier participants will be faced with significant choices including specializing on non-DoD markets, staying in the defense market, or exiting the business altogether. If significant budget reduction is realized, doors open for more dire actions. Downward budget pressures might create major mergers or sales of business sectors and acquisitions may begin to focus on non-DoD government or commercial markets. These scenarios will begin to play out slowly as the whole industry looks to recreate itself in preparation for peacetime operations.

Hardware prime contractors will continue to reorganize in order to mitigate organizational conflict of interest (OCI). Whether actual or perceived, OCI continues to be a significant concern in the industry, as evidenced by Northrop Grumman and Lockheed Martin both spinning off service sector organizations. Expect similar actions to continue with major hardware prime contractors.

## ***Commercialization***

The Defense Industrial Base (DIB) has transformed from its World War II origins, when its actions were clearly separated from those of the commercial industrial world. The DIB no longer is the trend-setter and instead lags the commercial markets, most notably in technology and information. The DIB is not a monolithic industry; different sectors have different capabilities, challenges and needs that must be addressed. As an industry, a focused and selective approach to each of these challenges is critical for future resolutions.

Addressing the differences between industry (commercial included) and government business cultures is a crux for unifying a fragmented DIB. Cultural issues, not generational, are at the center of some barriers between industry and government. Commercial enterprise is more adaptive and agile to market conditions and is focused on financial returns, whereas government tends to bring an antiquated, reactive approach to problem solving.

Commercial off the shelf (COTS) technology products have continued to move forward and gain momentum, while investment in manufacturing technology programs has decreased. Utilization of commercial products, where available, may solve some problems for the DIB, but many commercial products cannot meet the specifications for defense, aerospace or space applications. The commercial market will not be an end-all solution to DIB problems, but leveraging commercial best practices and new products and processes will undoubtedly serve to enhance government's approach to DIB sustainment.

## ***Business Practices***

The DIB must acknowledge the limitations of its isolated procurement practices and look to expand potential avenues of shared information. The policies directing industrial procurement must utilize horizontal business methods and limit isolated systems requiring complex supply chains that jeopardize ongoing theatre operations. Many potential solutions exist to strengthen the DIB, but some are more attractive than others. Government owned, commercially operated (GOCO) solutions are always tossed into the mix, but have met resistance from both industry and government entities. A more supported solution is the correct use of existing policy and statutory authorities to fix problems and bring light to DIB issues. The Defense Production Act (Title III), Manufacturing Technology programs (DOD ManTech) and the Industrial Base Innovation Fund (IBIF) Program are all authorities that can provide significant support in the growth and sustainment of the DIB.

DIB resources cannot be an afterthought in the war fighter procurement process. All participants must seek answers to the question: "How will these decisions affect IB partners and their supporting supply chains?" The 2010 Quadrennial Defense Review provided a glimpse into the IB and its importance to the future of the war fighter, but this reference is just one step towards a unified vision of the DIB. Additional steps must be taken to 'think outside the box' and allow the DIB to become more agile and proactive. Industry partners believe antiquated attitudes are pervasive in the industry and many solutions are reached haphazardly because it is easier to say 'yes' than it is to say 'no'. This attitude must change to create solutions that produce the best returns for the war fighter, rather than just utilizing the path of least resistance.

Groups invested in the advancement of the DIB, including government organizations, industry associations and industry suppliers on all tiers, must coordinate the collection and dissemination of DIB information. Studies on industrial base (IB) issues are rarely coordinated between different organizations and if they are, the resulting efforts are ad hoc, at best. Failure to open a dialog between all IB partners (i.e. government, defense industry, commercial industry) increases the risk of redundant reporting and resource misallocation. The goal of all IB partners should be to use the limited resources available to create a cohesive, single voice on the issues and business practices affecting the future of the DIB.

Industry business practices will direct the future of the DIB. Historic 'roadmaps and blueprints' of previous administrations laid out plans to create war fighter platforms, which some industry partners believe is an outdated practice and no longer serves the best interest of the government or its industry partners. Acquisition of the best products and processes available around the world to integrate into US war fighter programs would provide countless benefits to the DIB. While recent history has shown an interest in IB globalization, many global opportunities will continue to face strong policy limitations and may ultimately reside outside the control of DIB partners.

## ***Globalization***

The DIB no longer exists in its Cold War stance. Globalization is occurring and some industry participants believe the United States can no longer rely solely on domestic firms for the DIB. While arguments exist to support and refute globalization and its role in the future of the DIB, industry, at a minimum, must entertain these informed conversations and begin to create a consistent platform for globalization discussions.

Increased competition from global companies might benefit the DIB through cost reductions and novel procurement partnerships. However, economic globalization is not a given, and human decisions play a larger role in the affect of globalization than many people realize. Globalization also has its risks. Foremost are the potential for supply chain tampering and intellectual capital loss. Less control of DIB supply chains may weaken an already fragmented industry, and intellectual capital loss may hasten the current strain on domestic labor resources the industry is looking desperately to replenish. Mr. Brett Lambert, Director of Industrial Policy, Office of the Assistant Secretary of Defense for Acquisition and Alan Tonelson, Research Fellow, US Business and Industry Council (USBIC), provided additional information about globalization and its role in the future of the DIB in their plenary speaking sessions.

Additional globalization concerns include an increased presence of US-based, foreign-owned companies that did not exist five to ten years ago. Dealing with these emerging players will be a divisive issue for the DIB. Defining a 'domestic' supplier and who can compete as a 'domestic' supplier is continuing to become a major issue, as innovative firms look to capitalize on specialized new skills and available technologies across the globe.

Examples of the bilateral defense trade with Canada highlight potential benefits of global IB expansion. The US and Canada have engaged in a formalized pattern of bilateral industrial and military cooperation for the past five decades, and over 2,500 agreements of all aspects of continental security have been signed. The US has benefitted from a broader and stronger technology base including alternative sources of supply, while Canada has gained economical acquisitions of state-of-the-art military equipment. Since 1990, the bilateral trade has averaged \$3 billion annually and the US is the largest buyer of Canadian defense equipment.

The relationship with Canada highlights benefits of international collaboration; however, it also shows specific challenges ahead for the IB. Specific challenges include export controls, US IB consolidation and the timely identification of shared opportunities. Export controls and the International Traffic in Arm Regulations (ITAR), in particular, are seen as the biggest barrier to foreign market exploration. Specifically in Space applications, ITAR and export controls have not



prevented the rise of foreign space capabilities. In some cases, they have encouraged foreign development. For example, ITAR-free space products are now produced with the explicit goal of reaching the international market and bypassing US applications.

While ITAR and export control policy is a hot-button topic and many believe it is an impediment to capturing foreign markets, ITAR is still the most crucial tool for protecting critical technologies. ITAR, in its current form, may not need to change, but the technologies that fall under ITAR might need revision. Many in the DIB industry believe ITAR should build “higher walls around fewer things” and only protect those products with specific attributes unique to the US Defense and Aerospace markets. One result of a more narrow ITAR definition is the ability to export the “grey” technologies that already exist in the market to gain leverage for the suppliers in the DIB industry. The ability to leverage current industry suppliers may help contribute to a more sustainable supplier base for domestic/ITAR protected products down the road.

## **Break-out Sessions**

### ***Assessing Readiness in the Industrial Enterprise***

The Manufacturing Readiness Assessment (MRA) process was defined and discussed in detail, emphasizing its ability as a tool for communicating manufacturing maturity. The MRA process brings out producibility concepts and cost reduction ideas from suppliers, highlights manufacturing needs to upper management, and helps manage risk in the supply chain. The results of MRAs are manufacturing maturity plans that provide insight, not oversight. MRAs provide a lot of value at very little cost, and some MRAs have the ability to be paid for by the government, if incorporated in to the contract. A MRA result alone will not eliminate a contractor from source selection.

Some concerns were addressed including the subjectivity of MRAs and the duplication of Industrial Base Capabilities Assessments. Efforts are ongoing to develop case examples of MRA situations and distribute them through the MRA database. Duplication of IB Capabilities Assessments is a fine line to walk. Lessons learned and best practices need to be shared, however, there are proprietary issues driven by the specifics of individual programs. A relatively new effort in the initial stages of development may provide sharing of some generic information.

A concern about the loss of manufacturing expertise to conduct MRA studies was addressed by Gary Stanley of the Joint Defense Manufacturing Technology Panel (JDMTP) and he indicated current efforts are underway to hire more individuals, but also acknowledged the need for contractor support.

### ***Diminishing Manufacturing Sources***

Obsolescence management and mitigation and counterfeit manufacturing were topics of discussion. The difficulty of proactively managing obsolescence is balanced by the costs incurred and the potential cost avoidance of using tools to monitor and plan the support requirements for a system. Obsolescence management reviews should be conducted at the start of the system development and should not be an afterthought.

Counterfeit manufacturing includes any material whose identity or pedigree has been deliberately altered, misrepresented or offered as an unauthorized product substitution. The major source of such counterfeit production is electronic waste dumping. Disposal of waste occurs in third world countries, but the biggest participant in counterfeit manufacturing is China. According to a counterfeits report published in 2010, more than 9,000 counterfeit incidents were reported in 2008, with over half of those incidents originating in China.

The most common form of counterfeiting is the remarking and repackaging of commercial components as military specified products. Machined parts are also facing a counterfeit problem because they may not have gone through heat treating or other finishing steps to meet final specifications, but are still marked as authentic. According to the Department of Commerce, only 56% of distributors and board assemblers test their products before placing them into inventory.

Counterfeit risk mitigation increases as you move down the supply chain. Original component manufacturers, franchised distributors, independent distributors and broker distributors all have a role in minimizing counterfeits. Original component manufacturers are also faced with receiving returned inventory from customers which was not originally purchased from the manufacturer. These counterfeit returned products have now contaminated the OCM inventory and are resold without question.

Remedies for counterfeit components have been in the works. The Government-Industry Data Exchange Program (GIDEP) is a cooperative program for exchanging time sensitive, unclassified, non-proprietary technical information. Government agencies are required by the Office of Federal Procurement Policy Letter 91-3 to report all nonconforming (counterfeit) material to GIDEP; however, industry reporting currently is voluntary. One possible solution to industry non-participation is to specify through contracts that contractors must report counterfeit products.

### ***Defense Industrial Base Economic and Industrial Security***

Discussions and presentations revolved around dual-use goods, export licensure and capture of DIB supply chain information through the Office of Technology Evaluation. Dual-use goods are products that have civilian and military uses. Many initiator and trigger systems for explosive devices use relays and microcontrollers with very common commercial uses (i.e. cell phones, medical technologies). Criminal use of dual-use technologies is not driven by ideological or religious beliefs, but is driven by money.

Exported dual-use products need strict control and licensing. The Office of Technology Evaluation (OTE) manages an export control system evaluation and this evaluation assesses the effectiveness of dual-use export control and its economic impact on US industry and key technologies. The OTE analyzes the US trade impact to determine if licensing is inhibiting industrial competitiveness.

Export licensing is regulated by two major statutory authorities, the Export Administration Act (EAA) of 1979 and the International Emergency Economic Powers Act (IEEPA). Through these authorities, 20,000 licenses are cleared annually (85-90% of all applications) and less than 1% of dual-use exports are licensed.

Export control is essential to national security, foreign policy and non-proliferation efforts of the US. A continued movement towards a modernized export system is seen in the current administration; however, congressional willingness is still uncertain. Many agencies will have to work together to reach common systems and processes to manage and mitigate export control issues.

The OTE utilizes statutory programs that allow the collection of information for foreign availability assessments, short supply determinations and US national security threats (Section 232 investigations). These industry assessments use a mandated data collection authority under Section 705 of the Defense Production Act (DPA) of 1950 to gather critical information from the supply chain and other market participants. Data collected through these assessments are exempt from the Freedom of Information Act and allow companies to be direct and thorough in providing proprietary financial or other data. Most of the OTE assessments are initiated from

the military service, other government agencies, industry associations, Congress or other interested parties.

Considerable interest was generated from the ability of OTE to mandate participation in industry data collection with the threat of non-compliance penalties. Industry believes it has a grasp on the information about first tier contractors and OEMs, and OTE efforts should concentrate on second and third tier suppliers, where data collection is difficult and inaccurate. One caveat for using this authority is the OTE has a set limit of survey hours it can deploy annually. If more hours are needed to utilize this authority, individual branches must petition the Office of Managing Director (OMD) to receive additional survey hours. Industry members concluded that use of Section 705 of the DPA is relevant to the DIB and should be explored further to exploit its power on data collection.

### ***Warfighter Sustainment***

The Defense Logistics Agency (DLA) is leading efforts to change from managing supplies to managing suppliers. The agency is looking to manage global supply chains through a wide range of partnerships. Efforts underway include integration of new modeling software systems to control strategic material investments, stockpiling and life cycle support costs. The Strategic Material Management System, Buffer Stock Improvement Simulation Model, Enterprise Supply Chain Model and the Strategic Readiness Levels (SRL) are examples of new methods of managing sustainability costs.

The Strategic Material Management System (SMMS) employs a material-to-part map and looks at both the domestic and global market place for rapid ramp up of manufacturing capability. A strategic material is defined as any material that supports a weapon system. The SMMS partners with the Defense National Stockpile Center to ensure timely sourcing of critical material when there is no proactive management by the Department of Defense. The Defense Stockpile Center stockpiles strategic and critical materials to satisfy both civilian and military needs and acts a buying agent partnering with essential foreign nations, when needed.

The Buffer Stock Improvement Simulation Model determines the best buffer stock strategy to employ to reduce costs. The model shows where “show stoppers” occur and can model shipping, manufacturing and distribution operations. Successful implementation of similar models will eliminate stockpiling and create a “Lean Readiness” state for many commodities. The model can be used across the supply chain to evaluate supply and demand variables. The Enterprise Supply Chain Model will assure the development and maturity of a supply chain throughout a system’s lifecycle. The model will foster continuous improvement of the supply chain as the lifecycle progresses and will be a complementary tool used with the Buffer Stock Improvement Model.

Creation of a Strategic Readiness Criteria (SRC) will establish a Strategic Readiness Level (SRL) which follows in the footsteps of the Manufacturing Readiness Levels (MRL). The SRL will be used in a similar manner as the MRL, such that it will focus on identifying and mitigating sustainment risks. The goal of SRLs will be to better forecast problems and be proactive in their mitigation.

## ***Analysis and Insight***

The Industrial Analysis Center (IAC) is the executive agent for the Joint Industrial Base Working Group (JIBWG). Created in 1992, the IAC continually analyzes risks and identifies risk adjustment solutions to sustain a reliable industrial base. IAC research products inform IB decisions through planning and maintaining military readiness, preserving capabilities, and supporting homeland defense. Also supporting Homeland Defense is the Defense Critical Infrastructure Program (DCIP). The DCIP assesses risks to defense critical assets and provides outreach, education and training, among other services.

A review of the current economic environment revealed the pressures of emerging from a recession, coupled with financial bailouts (ARRA, TARP), expiring wars, declining defense budgets and US and foreign debt concerns. The DOD budget and the QDR both show a decline in spending on the horizon; however, some believe a new defense buildup will begin in 2020, following a cyclical pattern since 1840. Looming variables for spending include the future state of US presence in Afghanistan and Iraq, as well as a shifting of focus in NASA programs (Constellation cancelled) and the potential decline in homeland security spending. Each year the US does not fall victim to a terrorist attack increases the likelihood that DHA spending will decline.

## ***The Organic Industrial Base***

The US manufacturing base accounts for \$1.6 trillion, a 22% global market share, but employs 11.6 million people, the lowest total since 1941. Concerns about the widening gap between DOD requirements and US manufacturing capabilities start with the organic industrial base. The organic manufacturer is a government owned manufacturing facility whose primary mission is to help meet government supply requirements and includes arsenals, depots, production agencies, labs, interagency agreements and other government agencies. The organic base faces the challenge of providing for the DOD supply chain while the DIB capacity is decreasing and budget and outsourcing concerns are getting stronger.

DOD supply needs are immense in scope, diverse in product mix and worldwide in location. In order to support the DOD, organic manufacturers are forming a working group. This group is updating a database of organic manufacturers and creating capabilities statements to get the word out to DOD and others of the resources available through organic means.

A challenge for the organic base is to modernize its technology and to increase its manufacturing ecosystem. Long-term sustainability will come from an increased efficiency that is at least on par with commercial industry practices. A key to sustainability is to recognize legacy products or systems do not necessarily imply the need for legacy processes. Incorporation of new 3D modeling programs and collaborative ERP systems will facilitate organic manufacturing advancement.

The National Center for Defense Manufacturing and Machining (NCDMM) has taken an active stance in delivering innovative manufacturing solutions to the defense industry by collaborating with government, industrial and academic technology developers. NCDMM is an implementation organization, and it is attempting to take new technologies to the manufacturing floor. Through IB assessments, NCDMM can evaluate the state of manufacturing

operations, identify commonalities or pervasive deficiencies and make recommendations for improvement. Addressing supply chain issues through matching small shops with larger prime OEMs, NCDMM hopes to provide technology awareness training (not just vocational training) to provide process improvements and remove process bottlenecks.

## ***International Cooperation***

Numerous discussions touched on the relationship between the US and Canada with regard to the DIB. Recent and on-going Canadian force operations include Afghanistan, Africa, 2010 Vancouver Olympics, Haiti, G8/G20 summits and other counter-terrorism activities. Similar to the DOD budget, the 2010 Canadian defense budget has been impacted by the current economic environment. The Canada First Defense Strategy (CFDS) is the primary document that highlights Canadian military requirements and indicates what the government of Canada intends to implement over the next 15 – 20 years. The current economic condition could impact the rate of implementation of the CFDS, but will not change the goals of the strategy.

The Canadian Department of National Defence (DND) is currently conducting a Strategic Review of all activities and will capture similar results to those offered by the 2010 Quadrennial Defense Review (QDR). Not surprising is the focus on future funding and budgets. The US defense budget is expected to increase by 3%, but the RDT&E budget will only increase by 1.3% and the defense procurement budget will decrease by 1.8%. These funding levels raise concerns around maintaining current procurement strategies, current infrastructure and the ability to maintain on-going international collaboration. In the future, Canadian DIB operations will likely consist of providing maintenance and upgrades to older weapons systems as new procurement is reduced. International cooperation to support this activity is a key factor in its success and is an essential requirement to meet all DND goals.

The Canadian Association of Defense and Security Industries (CADSI) represents the concerns of the Canadian DIB within Canada and advocates for its members primarily with the Canadian government. The largest defense and aerospace companies within Canada tend to be foreign subsidiaries and CADSI also helps to advocate the position of Canadian companies with the greater North American IB. One such advocacy is the continued concern over ITAR restrictions. Two major concerns with ITAR include the slow approval process for export licenses and that dual-national restrictions have created lawsuits in Canada related to human rights violations. The ongoing relationship between the US DoD and the JSF international partners is unique in the way it has addressed export control and ITAR issues. An ITAR exemption was negotiated with the State Department to allow foreign industry to have a level playing field in the RFP Process, ensuring that all companies had the same access to information in preparing RFP submissions. This step, among others, is paramount in the successful building of the partnership.

The Aerospace Industries Association of Canada (AIAC) also noted the increased role of the Canadian aerospace community in the repair and overhaul niche industry, citing heavy dependence of Canadian companies on exports, with the majority of sales going to the US market. To help the Canadian DIB with Canada-US agreements, the Canadian Commercial Corporation (CCC) acts as an export contracting agency. As the prime contractor to the buyer of services, CCC also manages the payments to the supplier and maintains audit and administrative services to meet all requirements of DPSA and DFARS.

## ***DIB Investment Solutions***

The Office of Technology Transition (OTT) delivered information on multiple investment programs for the DIB. The programs are managed within the DDR&E organization and are responding to the imperatives of the new director. All OTT programs are related to technology transfer/transition between the defense industry and the military services. The programs support the movement of technology from DOD labs to industry so that they can produce products to benefit the war fighter. Programs within OTT include the Defense Production Act Title III, Manufacturing Technology programs, Technology Transition Initiatives and Technology Transfer programs.

The DPA Title III Program takes actions to ensure production capabilities that are in the interest of defense and national security. The goal of DPA Title III is to remove risk for companies by providing capitalization to establish viable production capacity. Title III also helps with development of sound business plans and builds a steady market for long term viability for the company. A typical Title III project will support the DIB. One example is the Beryllium Supply Initiative, which was established because only one US producer existed and that entity was shutting down. DPA Title III investments can support both US and Canadian industries. There are no clauses within the DPA that prevent using its authorities to work with Canadian companies, and activities are openly competed through a Broad Agency Announcement (BAA).

ManTech is considered a critical asset for developing defense production capability. The ManTech program is used to support the repeatable and timely delivery of defense products that have progressed past the prototype level. One type of ManTech initiative relates to “virtual” design and manufacturing processes, which address technical data package deficiencies. Development of these technologies will continue to be a key focus of ManTech activities.

The Technology Transition Initiatives (TTIs) allow for the implementation of “un-planned” technology advances into on-going programs of record. These projects provide funding to help cover the gap created by inserting new war fighter requirements that were not part of the original program of record due to technology advances. Support and funding of TTIs are subject to a selection process conducted by OTT. Early contact with the affected Program of Record is made to ensure that the Program of Record will provide operational commitment and financial support.

The Technology Transfer program allows defense laboratories to move technology into the private sector to permit leveraging of research and development findings. The program creates economic advantages for industry and increases return on investment for government. The program stimulates defense industry companies to work with DOD through the non-competitive sharing of technical data. The Technology Transfer program takes advantage of all the various vehicles, including CRADAs, CLAs and grants. The biggest barrier to technology transfer is that industry doesn’t know what opportunities exist or how to engage with DOD to begin the process. Many of the companies that eventually get involved with TTIs have not dealt with DOD previously, since the new technology is often developed by smaller companies without ties to DOD.

The North American Technology and Industrial Base Organization (NATIBO) Memorandum of Understanding (MOU) promotes collaboration between the US DoD and Canadian DND in projects that improve national security and contribute to the North American industrial base. NATIBO is highly flexible and has a wide scope in supporting the advancement of development efforts from mid-level TRLs to product prototyping. The NATIBO Business Development Working Group helps to identify areas of technology where common operational interests exist between the two nations, and then facilitates and coordinates the establishment of technology Working Groups. The Working Groups exchange information and develop proposals for Project Arrangements. The MOU also provides for collaboration with industry.



## List of Presentations

The following speakers presented during the 2010 Defense Industrial Base Seminar and Workshop presented at Fort McNair on 15-16 June 2010.

Complete presenter bios and presentation materials are available for download at the 2010 Defense Industrial Base Seminar Website:

<http://www.usasymposium.com/ibconference/agenda.htm>.

### ***Plenary Session***

<b>Presenter</b>	<b>Title &amp; Organization</b>
Mr. Brett Lambert	Director Industrial Policy, Office of the Assistant Secretary of Defense for Acquisition
Mr. John Neri	Director General International and Industry Programs (DGIIP) – HQ DND Ottawa Canada
Mr. Michael R. Kistler	Deputy CHENG/Executive Director Naval Systems Engineering Directorate
Mr. Phil Odeen	Defense Business Board, Chair For Task Group on Assessing the Defense Industrial Base
Mr. William R. Smith	National Security Space Office, SAF/US(OSD-ATL NSSO)
Dr. Ashton B. Carter	Under Secretary of Defense for Acquisition, Technology & Logistics
Mr. Ronald Covais	President of the Americas for Lockheed Martin Corporation
Mr. Doug Schaefer	Missile Defense Agency, Director of Producibility and Manufacturing Technology
Mr. Alan Tonelson	Research Fellow at the US Business and Industry Council (USBIC)

### ***Break-out Sessions***

#### **Assessing Readiness in the Industrial Enterprise**

<b>Presenter</b>	<b>Title &amp; Organization</b>	<b>Presentation Title</b>
Gary Stanley	AFRL/RXMT, Lead for the DoD MRL working group	Overview
Art Temmesfeld	Air Force Research Laboratory	Government Findings
Gene Wiggs	Consulting Engineer, GE Aviation	Industry Perspective on Manufacturing Readiness
Robert Hartzell	OSD DDR&E Support	MRLs in the IDA Process

## Diminishing Manufacturing Sources

Presenter	Title & Organization	Presentation Title
Alex Melnikow	DDR&E (DSPO)	Welcome/Introduction/Wrap-up
Victoria Skiff	NUCW Division Keyport	DMSMS & Obsolescence
Ric Loeslein	NAVAIR	Counterfeit Parts
Jim Stein	DDR&E SE (DSPO)	GIDEP
Douglas Casanova	DDR&E	Defense Microelectronics Activity

## Defense Industrial Base Economic and Industrial Security

Presenter	Title & Organization	Presentation Title
Brad Botwin	Director, Industrial Studies Office of Technology Evaluation	Defense Industrial Base Assessments
Rick Shimon	Special Agent In Charge, Washington Field Office	Export Enforcement: Policing the Avenues of Trade
Gerry Horner	Senior Trade and Industry Analyst Office of Technology Evaluation	Export Control System Evaluation
Bernard Kritzer	Director Office of Exporter Services	Overview of Commerce Department's Export Control Program

## International Collaboration

Presenter	Title & Organization	Presentation Title
Steve Dundas	DGIIP/DCMC	Leveraging the North American Defense Industrial base for the Warfighter
Janet Thorsteinson	VP, Government Relations Canadian Association of Defense and Security Industries (CADSI)	International Collaboration
Jon Schreiber	JSF Director, International Directorate, JSF Program Office	International Cooperation: The Joint Strike Fighter Program
Les Aalders	EVP, Aerospace Industries Association of Canada (AIAC)	The Canadian Aerospace Industry
Victoria MacKenzie	Manager, Aerospace and Defense Canadian Commercial Corporation (CCC)	Leveraging the North American Defense Industrial Base for the Warfighter

## Warfighter Sustainment

Presenter	Title & Organization	Presentation Title
Luis Villarreal	HQ DLA	DLA Industrial Capability and Warstopper Overview
Rupy Sawhney	University of Tennessee	Supply Chain Simulation Modeling
Steve Roadfeldt	HQ DLA	Strategic Buffer Investments (Nomex & Specialty Steel)
Luis Villarreal/Steve Roadfeldt	HQ DLA	DLA Sustainment Readiness Criteria
Joe Paxton	University of Alabama Huntsville	Enterprise Supply Chain Maturity Throughout the Life Cycle

## DIB Investment Solutions

Presenter	Title & Organization	Presentation Title
Mark Buffler	Director, Defense Research and Engineering Office of Technology Transition	Defense Production Act (DPA) Title III
Adele Ratcliff	Director, Defense Research and Engineering Office of Technology Transition	Manufacturing Technologies (ManTech) Program
Dan Altobelli	SRA, International	Technology Transition Initiative (TTI) Program
David Appler	SRA, International	Technology Transfer Program
Maj. Mike Ross	NATIBO	North American Technology and Industrial Base Organization (NATIBO)

## Analysis and Insight

Presenter	Title & Organization	Presentation Title
Don Burnett, Dennis McKnight, Gene Marrone	DCMA Industrial Analysis Center	DCMA Alignment, IAC reorganization, Customer Support and Agreements, JIBWG Overview, DIB CIP Overview and Information Sharing
Jim Averell	Economist DCMA Industrial Analysis Center	Defense Industrial base Economic Forecast
Roudy Romulus	DCMA Industrial Analysis Center	Specialty Metals and Trend Analysis

## The Organic Industrial Base

Presenter	Title & Organization	Presentation Title
Greg Colvin	Senior Business Manager Department of Energy, Kansas City Plant	Organic Manufacturing Community
Brian Burks	Chief Depot Operations HQ Air Force Material Command	USAF Organic Industrial Base
John VanKirk	President and Executive Director National Center for Defense Manufacturing and Machining	Organic Industrial Base Assessment
Stephen Luckowski	Competency Manager Materials, Manufacturing and Prototype Technology US Army ARDEC	The Single Digital Thread – An Enterprise Approach to Establishing an Organic Base Manufacturing Ecosystem